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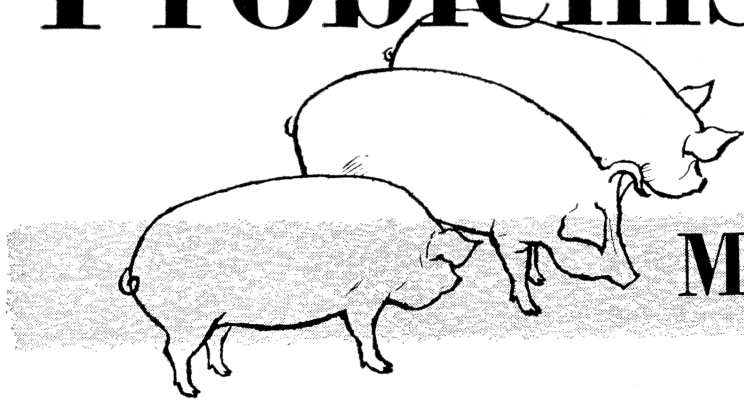

by Sam H. Thompson

Several recent *Iowa Farm Science* articles have dealt with hog feeding, breeding, management and marketing weights. But after these problems, there is still one more — that of effectively marketing your hogs.

RECENT research and demonstrations show clearly that meat-type hogs are worth more on the market than are overfat or average hogs. This comes about because consumers will absorb the lard from fat hogs only at a price per pound sharply less than they're willing to pay for lean cuts of pork.

But this doesn't necessarily mean that, in the short run, farmers would receive more in total for the hog crop if going market prices were based on the wholesale value of the pork products. It's true that meat-type hogs would command a differential above average hogs. But the total return of overfinished hogs, based on wholesale prices for lean meat and fat, would be less than that for average hogs.

Even though willing to adjust his hog production operations to the trend in consumer demand—which calls for more lean meat—the farmer needs some time to bring this about (see "Hogs to Fit Our Needs" in the May 1954 issue of IOWA FARM SCIENCE). In this longer run, however, a larger proportion of meat-type hogs would yield a higher return for a given annual production of hogs. That is, consumers would be willing to pay more for the products of meat-type hogs, and competition would tend to pass this back to the producers of meat hogs.

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Backfat Is Key . . .

For hogs of a given weight, backfat thickness is the most important factor in determining the proportion of lean cuts—and, thus, the consequent value of the carcass. Of less importance is the length of the side from the forward edge of the first rib to the forward point of the aitchbone.

Let's see how closely the members of one local livestock cooperative were able to reflect carcass values in a demonstration grading of live barrows and gilts. They attempted to select, for later slaughter, four grades of barrows and gilts in the 200- to 220-pound range representing official United States standards — Medium, Choice No. 1, Choice No. 2 and Choice No. 3. It wasn't always possible at the farms visited to find the representative weights and degrees of finish desired. And there was, of course, some difficulty in recognizing specific grades.

The guide suggested by official United States standards for two ranges of carcass weights for backfat thickness and yield of four lean cuts for Medium and Choice No. 1, No. 2 and No. 3 grades of barrows and gilts is shown in table 1.

These standards became effective Sept. 12, 1952. Carcass standards on backfat thickness and length of side together with proportions of four lean cuts (trimmed) are set forth. Length of side for the approximately 180- to 240-pound live barrows or gilts is reported in the guide at 27 to 29.9 inches. For 240- to 300-pound barrows and gilts, the guide places length of side at 30 to 32.9 inches.

A committee of six members of the livestock co-op selected 10 barrows and gilts ranging in weight from 195 to 245 pounds and attempted to select both choice and medium grades. They trucked these barrows and gilts to the local yards where other members of the co-op and a vocational-agriculture class tried to select one representative each, typical of Medium and Choice No. 1, No. 2 and No. 3 grades.

Slaughter Tells Story . . .

Two days later, the hogs were hauled about 30 miles to the college Meat Laboratory and slaughtered. After chilling, the weights

TABLE 1. Weight and Measurement Guides to Grades or Barrow and Gilt Carcasses[a]

Weight of carcass	Medium (unfinished)	Choice No. 1 (Meat)	Choice No. 2 (Average)	Choice No. 3 (Overfat)
120 to 164 lbs.				
Fatback thickness, inches	1.1 to 1.5	1.5 to 1.8	1.8 to 2.1	2.1 or more
Length of side, inches	27.0 to 29.9	27.0 to 29.9	27.0 to 29.9	27.0 to 29.9
165 to 209 lbs.				
Fatback thickness, inches	1.2 to 1.6	1.6 to 1.9	1.9 to 2.2	2.2 or more
Length of side, inches	30.0 to 32.9	30.0 to 32.9	30.0 to 32.9	30.0 to 32.9
Percent of carcass yield in four lean cuts: trimmed loins, hams, picnics, Boston butts		49.9 to 51.0	45.0 to 48.0	Less than 45

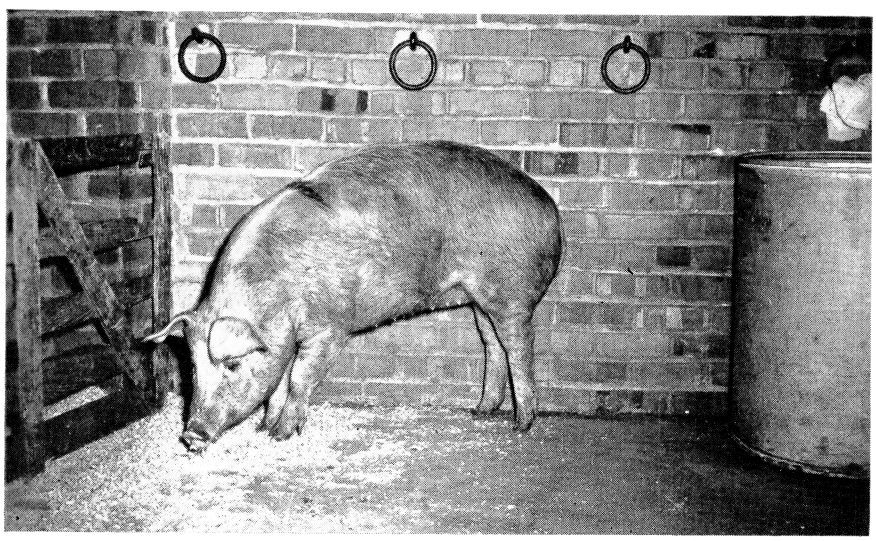
[a]Adapted from Federal Register, Oct. 6, 1951.

TABLE 2. Actual Weights and Measurements on the Hook

Item	Medium	Choice No. 1 (Meat)	Choice No. 2 (Average)	Choice No. 3 (Overweight)
Hog labeled	A	B	C	D
Sex	Barrow	Gilt	Gilt	Gilt
Carcass weight, lbs.	163	143	182	185
Dressing percent	76.2	75.3	79.1	75.8
Thickness backfat, inches	1.6	1.6	2.0	2.1
Length of side, inches	31.1	29.7	30.5	29.9
Percent four lean cuts are of carcass	47.1	49.9	45.6	45.1
Wholesale value of four lean cuts per 100 lbs. liveweight	$17.46	$18.54	$17.56	$16.59

and measurements on the hook of the barrows and gilts were recorded as shown in table 2. Dr. E. A. Kline and Dr. Joe Kastelic of the Animal Husbandry Department assisted in analyzing and grading the carcasses.

Notice that the Choice No. 1 selection (in this case, a meat gilt) had 1.6 inches of backfat and 49.9 percent of four lean cuts closely trimmed — including ham, loin, picnic ham and Boston butt. The Choice No. 2 selection (an average gilt) had 2 inches of backfat and yielded 45.6 percent of trimmed lean cuts. The Choice No. 3 selection (an overfat gilt) had 2.1 inches of backfat and yielded 45.1 percent of trimmed lean cuts.



This gilt, selected as a Choice No. 1, had sides 29.9 inches long, and backfat thickness measured 1.6 inches. The four lean cuts—trimmed ham, trimmed loin, picnic ham and Boston butt—made up 49.9 percent of the carcass. Wholesale value of the four lean cuts per 100 pounds liveweight was $1.95 more than for the Choice No. 3 selection.

The barrow selected to represent the Medium grade was better finished than most of the group estimated. It had a backfat thickness of 1.6 inches—the same as the Choice No. 1 selection. Yield of four lean cuts, however, was 47.1 percent, or 2.8 percent less than the Choice No. 1 selection.

The wholesale value (based on Chicago quotations) of four lean cuts per 100 pounds of liveweight for the Choice No. 1 selection (meat gilt) was $18.54; for the Choice No. 2 (average gilt), it was $17.56; and for the Choice No. 3 (overfat gilt), it was $16.59.

The Difference . . .

Using the Choice No. 2 selection (average gilt) as a base, the value of the four lean cuts of the Choice No. 1 selection in this demonstration was 98 cents greater per 100 pounds liveweight. In contrast, the value of the four lean cuts of the Choice No. 3 selection was 97 cents less. Thus, the value of the four lean cuts per 100 pounds of liveweight for the Choice No. 1 (meat gilt) was $1.95 more than for the Choice No. 3 (overfat gilt). Using only the value of the four lean cuts, however, does slightly overstate the actual difference in carcass values.

Research shows that in a recent year the deviation between wholesale values of Choice No. 1 and No. 3 carcasses was $1.73, or about $1 per 100 pounds liveweight for 180- to 240-pound hogs (see "How Much Are Your Hogs Worth?" in the March 1953 issue of IOWA FARM SCIENCE). Feed costs are no greater in meat-type hog production, according to Dr. L. N. Hazel of the Animal Husbandry Department.

Group Did Well . . .

Average estimates of those participating in grading the live hogs were in some cases quite close to actual on-the-hook measurements (see tables 2 and 3). Actual backfat thickness of the Choice No. 1 (meat gilt) was only 0.1 inch more than the average of all estimates. For the Choice No. 3 selection (overfat gilt), the actual measurement and the average estimate of

backfat thickness were the same. Actual backfat thickness of the Choice No. 2 (average gilt) was 0.2 inch more than the average estimate.

Average estimates of length of side all fell short of the actual measures. But the average estimates of length were placed in the correct relative order.

Those participating did give a good account of themselves. Because there's limited opportunity for practice, probably few farmers can be expected to acquire great skill in grading. Even full-time commercial operators have problems. But we live in an age of specialization, and continuous practice tends to develop rather high skills among commercial graders.

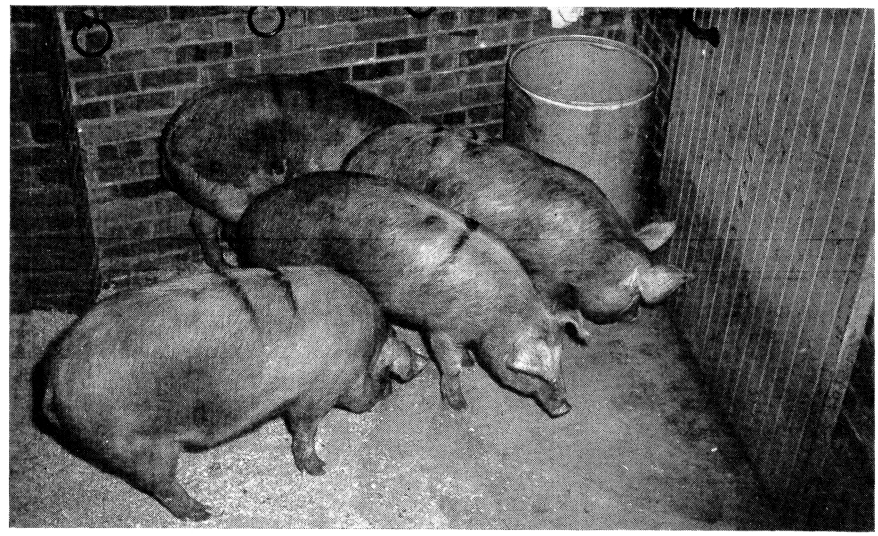
Liveweights just preceding slaughter were: Medium, 214 pounds; Choice No. 1, 190 pounds; Choice No. 2, 230 pounds; Choice No. 3, 244 pounds. Shrinkages in pounds per hundredweight between the scales at the shipping point and the unloading dock for each barrow and gilt in the same order were 2.7, 2.6, 4.2 and 0.4 pounds.

Quality and Value . . .

Though carcass measurements furnish a generally reliable guide to pork *quality* and grades, other considerations may have a bearing on grade and *value*. Among these may be conformation of hams, loins and others. An illustration of this is shown in table 4.

In the proportion of each of three highest-priced lean cuts—ham, loin and Boston butt—the Choice No. 1 (meat gilt) is well ahead of the other three. The Medium grade is well ahead of the other three in proportion of carcass in picnic ham; but that's the lowest-priced of the four lean cuts. Also, in proportion of loin, the Medium falls below the Choice No. 1 and Choice No. 2. The Choice No. 3 (overfat gilt) selection excels the Choice No. 2 selection (average gilt) in proportion of carcass represented by ham, picnic and Boston butt while falling far behind in proportion of loin.

The differences in the total wholesale values of the four lean cuts per 100 pounds liveweight were almost wholly due to the proportion of lean meat each carcass yielded. The heavier lean cuts from 220- to 240-pound hogs often sell at a lower price than those from hogs weighing 200 to 220 pounds. In this demonstration, loins, picnics and Boston butts were priced the same for all weights in the following market. But this uniformity in price is a rather unusual situation. On the day of the demonstration, the wholesale market price of the hams of the Choice No. 1 hog was ¾ cent per pound higher than those from the other three heavier hogs.



Barrows and gilts selected by farmer members of a cooperative livestock marketing association: gilt marked I was selected as Choice No. 1; gilt marked IV as Choice No. 2; gilt marked II as Choice No. 3; and barrow marked III as Medium. This picture and that on opposite page were taken as hogs were brought in for slaughter.

What's to Come?

Nine Iowa packing houses now pay a differential for meat-type hogs—mostly for hogs in the 200- to 240-pound range. At some plants, the differential applies to well-finished hogs down to 190 pounds. The amounts added for meat hogs vary mostly from 25 to 50 cents per hundredweight. Packers also are paying more for meat hogs at public stockyards markets. The extra amounts paid for meat hogs at public stockyards

TABLE 3. Average Estimates of Weights and Measurements of Barrows and Gilts by Cooperative Members

Item	Medium	Choice		
		No. 1 (Meat)	No. 2 (Average)	No. 3 (Overfat)
Hog labeled	A	B	C	D
Liveweight, pounds	213	195	231	239
Thickness backfat, inches	1.31	1.5	1.8	2.1
Length of side, inches	28.8	27.6	28.6	28.1

TABLE 4. Proportion Specified Lean Cut Is of the Carcass for Each Barrow and Gilt

Cut	Medium	Choice		
		No. 1 (Meat)	No. 2 (Choice)	No. 3 (Overfat)
Hog labeled	A	B	C	D
	(percent)	(percent)	(percent)	(percent)
Ham	17.55	18.32	16.26	16.54
Loin	13.99	16.22	14.39	12.97
Picnic	9.33	8.53	8.79	8.97
Boston butt	6.26	6.85	6.15	6.59
Total	47.1[a]	49.9[a]	45.6[a]	45.1[a]

[a]Totals rounded to one decimal place.

vary with changing competitive conditions and can't be readily estimated.

What does all this mean in market selection? It means that effective selection of a marketing place is a rather complicated task. It means that farmers must be able to grade effectively. It requires also that a farmer be able to estimate (1) the probable total gross price (including base price and added differential for meat hogs, if any) available at each market and (2) the cash costs, shrinkages and death losses to each market. He needs both of these in order to estimate his probable net return.

Finally, the farmer must have an economical unit to transport. To achieve this the farmer might sell through a local buyer or jointly with other farmers through his livestock cooperative. Some packer buyers are authorized to pay a differential for meat hogs; some are not. So far as is known, packers have not usually paid differentials for meat hogs to local cooperative livestock marketing associations for redistribution to the members furnishing them.

Effective farm marketing of livestock involves two important decisions—choosing the time of sale and the place of sale. Deliveries of slaughter hogs are highest in November, December and January. Comparatively few hogs come to market in June, July and August.

This seasonal distribution has changed in recent years. More sows farrow their pigs early, and new feeding systems have played their part in hastening readiness for market. May and June slaughter tends to be smaller. Slaughter in July continues to decline, while November slaughter tends to equal that of December.

This changing distribution of slaughter hog receipts coming from earlier marketings has, in turn, influenced the price pattern. The summer high, for example, tends to come earlier than formerly. But within the broader seasonal price swings are short-time fluctuations also of importance to farmers in selecting the marketing time.

Monthly prices of choice barrows and gilts (200 to 220 pounds and 240 to 270 pounds) in 1953 are shown at right. Monthly prices for choice barrows and gilts of 200 to 220 pounds are also shown.

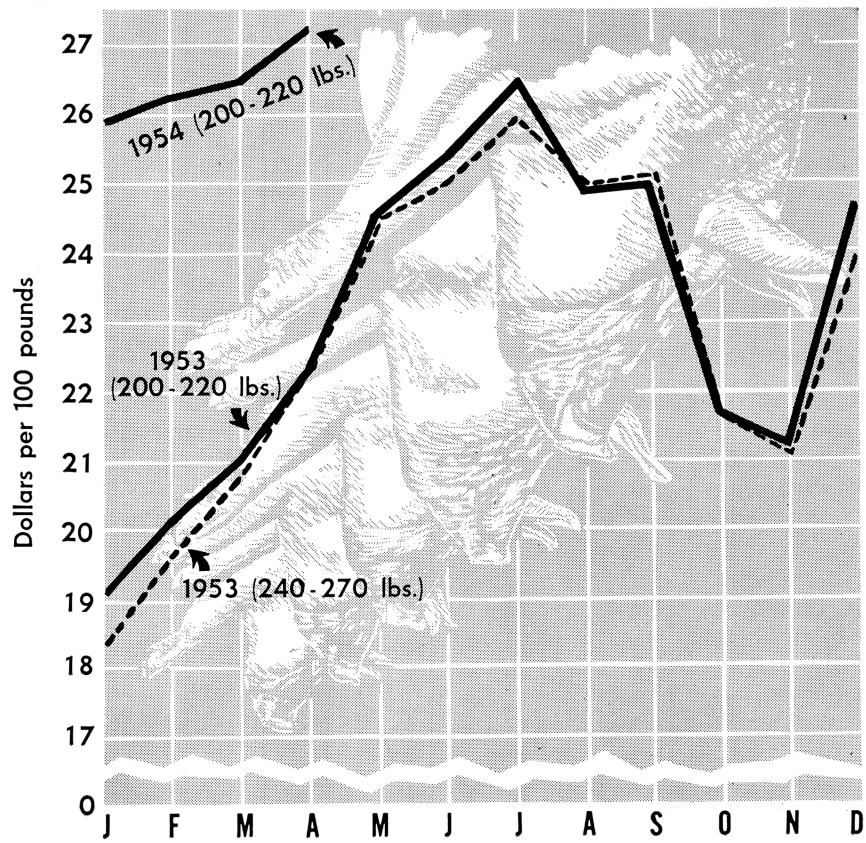
The highest monthly average for choice barrows and gilts, 200 to 220 pounds, came in July for 4 of the 5 years preceding 1954. Normally, the December price may be somewhat higher or lower than in November. In December of 1949 and 1951, prices on choice barrows and gilts, 200 to 220 pounds, were 32 and 15 cents respectively below November.

The reverse was true in 1950 and 1952 when December prices exceeded November by 88 and 28 cents respectively. In the fall of 1953, a more rapid rate of marketing of a reduced hog crop resulted in relatively small December marketings. As a result, the December average of quotations on choice barrows and gilts jumped $3.42 above the November level.

More hogs will be marketed this year. The drop after the July peak is likely to be rather sharp. In the 4 years, 1949 to 1952, the average of December quotations on choice barrows and gilts was down about 20 percent from July. The decline this year may be larger than that. Relative prices of grain and protein supplement are also involved in choosing the time of sale (see "Getting Greater Hog Profits" in the April 1954 issue of Iowa Farm Science).

In August, September and October of 1953 (see chart at bottom), choice barrows and gilts, 240 to 270 pounds, brought more per hundredweight than the base group of usually preferred lighter weights. By November, the heavier barrows and gilts were below the base group by 9 cents per hundredweight. A month later, in December, choice barrows and gilts, 240 to 270 pounds, were selling at a differential of 57 cents under the base group.

Monthly Prices of Barrows and Gilts (200 to 220 lbs., 1953 and 1954, and 240 to 270 lbs., 1953)



Monthly Differentials of Barrows and Gilts, 240 to 270 lbs., From Barrows and Gilts, 200 to 220 lbs., 1953